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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/625,750	07/24/2003	Tetsuya Shigeta	Q76569	8136

23373 7590 04/09/2007  
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EXAMINER
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LAO, LUN YI

ART UNIT	PAPER NUMBER
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2629

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/09/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/625,750	<b>Applicant(s)</b> SHIGETA ET AL.	
	<b>Examiner</b> LUN-YI LAO	<b>Art Unit</b> 2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 30 January 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 46-61 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 46-61 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>7/24/2003</u> . | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION*****Double Patenting***

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 46-61 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-24 of U.S. Patent No. 7,042,424 in view of Yamada et al(6,556,214).

Comparing the present application and the copending application as below:

10/625,750 claim 46	7042,424 claim 1
A method for driving a plasma display comprising cells	A method for driving a plasma display comprising cells

Executing pixel data writing step for setting in each of N(N being natural number) divided display periods	Executing pixel data writing step for setting in each of N(N being natural number) divided display periods
Light-emission drive sequence comprising first and second light-emission drive sequences alternately performed every field or frame, said first and second light- emission drive sequences having different numbers of light-emissions in the light- emission sustaining period of each ones of said N divided display period	light-emission drive sequence comprises a first drive pattern to be carried out by alternating, at intervals of the respective unit display period, first and second light- emission drive sequences which have ratios of the number of times of light- emission different from each other in the light-emission sustaining period of the respective N divided display periods, and a second drive pattern to be carried out by alternating, at intervals of the respective unit display period

The US patent fails to disclose the brightness level of respective gray-scale brightness points obtained at a group of pixels.

Yamada et al tech disclose the brightness level of respective gray-scale brightness points(e.g. Target pixel) obtained at a group of pixels(see figures 8-10, 17

Art Unit: 2629

and column 14, lines 13-29). It would have been obvious to have modified US patent(7,042,424) with the teaching of Yamada et al, so as to improve a display quality by reducing deterioration.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 52-54, 56-59 and 61 are rejected under 35 U.S.C. 102(e) as being anticipated by Saegusa et al(6,175,194).

As to claims 52-54, 56-59 and 61, Saegusa et al teach a method for driving a display panel, comprising: setting, in each of sub-display periods(e.g. SF1-SF14) within a unit display period, discharge cells to a non-light-emitting cells or light-emitting cells, wherein the discharge cells correspond to pixels; performing a first light-emission drive sequence(e.g. mode 4) to obtain a brightness level(e.g. 32) of respective gray-scale brightness points at a single pixel of the pixels(see figures 1-18; column 3, lines 35-53; column 9, lines 46-68 and column 10, lines 1-38). Saegusa et al teach a method for performing a second light-emission drive sequence(e.g. mode 2) to obtain a brightness

Art Unit: 2629

level of respective gray-scale brightness points at a group of the pixels(see figures 11-18), wherein the brightness level of the respective gray scale brightness points at the single pixel(e.g. 32) is set to differ with the brightness level(e.g. 6, 10, 16, etc.) of the respective gray-scale brightness points at the group of pixels(see figures 16-18; column 11, lines 37-68; column 12 and column 13, lines 1-43).

As to claims 53 and 58, Saegusa et al teach a method for applying multi-level gray-scale(e.g. 1, 3, 5, 8; etc) processing to an input video signal in the respective sub-display periods(SF1-SF14) to obtain pixel data, and wherein the discharge cells are set to non-light-emitting cells or a light-emitting cells in response to the pixel data(see figures 2-3, 11; column 2, lines 63-68; column 3, lines 1-18 and lines 35-56; and column 8, lines 20-63).

As to claims 54 and 59, Saegusa et al teach a method for allowing only the light-emitting cells to emit light only by a number of times corresponding to weights assigned to the respective sub-display periods(SF1, SF2 and SF 4 are emitted light when the cell has gray scale level is 48 in mode 4)(see figure 2-3, 11; column 2, lines 63-68; column 3, lines 1-18 and lines 35-56; and column 8, lines 20-63).

As to claims 56 and 61, Saegusa et al teach the weights(3) of the respective sub-display periods(e.g. SF2) in the first light-emission drive sequence(e.g Mode 1) are different than the weight(6) of each of corresponding respective sub-display periods(e.g. SF2) ) in the second light-emission drive sequence(e.g. Mode 2)(see figure 11).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 52-61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagakubo(5,757,343) in view of Yamada et al(6,556,214).

As to claims 52-61, Nagakubo teaches a method for driving a display panel, comprising: setting, in each of sub-display periods(SF1-SF8) within a unit display period, discharge cells to a non-light-emitting cells or light-emitting cells, wherein the discharge cells correspond to pixels; performing a first light-emission drive sequence(e.g. mode 1) to obtain a brightness level(e.g. 32) of respective gray-scale brightness points at a single pixel of the pixels(see figures 1-7; column 2, lines 28-56 and column 4, lines 34-58).

Nagakubo fails to perform a second light-emission drive sequence to obtain a brightness level of respective gray-scale brightness points at a group of the pixels.

Yamada et al teach a method for performing a second light-emission drive sequence(e.g B pattern) to obtain a brightness level of respective gray-scale brightness points at a group of the pixels(see figures 9 and 17), wherein the brightness level of the

Art Unit: 2629

respective gray scale brightness points at the single pixel(e.g. 32) is set to differ with the brightness level(e.g. 16, 8, etc.) of the respective gray-scale brightness points at the group of pixels(see figures 8-10, 17 and column 14, lines 13-29). It would have been obvious to have modified Nagakubo with the teaching of Yamada et al, so as to improve the display quality by reducing the deterioration(see column 1, lines 10-14).

As to claims 53 and 58, Nagakubo teaches a method for applying multi-level gray-scale(e.g. 2, 4, 8, 16; etc) processing to an input video signal in the respective sub-display periods(SF1-SF8) to obtain pixel data, and wherein the discharge cells are set to non-light-emitting cells or a light-emitting cells in response to the pixel data(see figures 1-3D and column 2, lines 4-56).

As to claims 54 and 59, Nagakubo teaches a method for allowing only the light-emitting cells to emit light only by a number of times corresponding to weights assigned to the respective sub-display periods(e.g. SF5, SF7, SF8 are emitted light when the cell has gray scale level is 44 in mode 1)(see figures 1-3 and column 2, lines 4-14).

As to claims 55 and 60, Nagakubo teaches a method alternately performing, for every field or frame, the first light-emission drive sequence(e.g. Mode 1) and the second light-emission drive sequence(Mode 2)(the average luminance level calculated based on one field or frame portion and the drive sequence could be changed based on the average luminance level)(see figures 2-7; column 5, lines 56-68; column 6; column 7, lines 1-40; column 8, lines 46-54 and column 9, lines 46-58 and column 10, lines 1-8).

As to claims 56 and 61, Nagakubo teaches the weights(e.g. 512, 256, 128; etc) of each of the respective sub-display periods(SF1-SF8) in the first light-emission drive



Art Unit: 2629

sequence(e.g Mode 1) are different than the weights(e.g. 384, 192, 96; etc.) of each of the corresponding respective sub-display periods(SF1-SF8) in the second light-emission drive sequence(Mode 2)(see figures 2-3D).

As to claims 56 and 61, Nagakubo teach the weights(512) of the respective sub-display periods(e.g. SF1) in the first light-emission drive sequence(e.g Mode 1) are different than the weight(384) of each of corresponding respective sub-display periods(e.g. SF1) ) in the second light-emission drive sequence(e.g. Mode 2)(see figures 3A-3B).

### ***Conclusion***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lun-yi Lao whose telephone number is 571-272-7671.

The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amr Awad can be reached on 571-272-7764. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2629

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

March 28, 2007

  
Lun-yi Lao

**Primary Examiner**